

Improving Environmental Performance with ISMS

**ISM Workshop - Pasco, WA
December 5-6, 2000**

**Dale T. Bignell
Westinghouse Savannah River Company**

Objective

Continuous Improvement of environmental performance through effective & complete communications, comprehensive hazards analyses, and timely corrective actions.

How?

Handle environmental issues more like safety issues.

Operations Decision-Makers Want and Need to Know:

↓ **Hazard**

↓ **Impact or
Consequence**

↓ **Remedy**

What are the Key Problems on which to Focus?

Communications between
Environmental and Operations

Information Needs

- ❧ **What “is” an environmental hazard?**
- ❧ **What are the consequences?**
- ❧ **Remedy or Corrective Actions to the hazard:**
 - What?**
 - Why?**
 - When?**
- ❧ **Comparison -- How effective & complete are communications for “safety” hazards?**

Categorizing Unsafe Conditions

OSHA 29 CFR 1903

WSRC FEB Independent Assessments

<u>Category</u>	<u>Abatement</u>	<u>Hazard</u>
1A – Imminent Danger	Immediate	Death or serious physical harm is threatened.
1B – Serious	Within 5 working days after receipt of draft report.	Substantial probability that death or serious physical harm could result from condition.
2 – Other than Serious	Within 15 working days after receipt of draft report.	Hazardous condition would probably not cause serious physical harm but could have direct affect on employee safety and health.

By Contrast in Environmental . . .

- ❧ **No consistent, recognized Abatement Categories for problems identified (use intuition).**

EMS (ISO 14001) has:

- ❧ **Environmental Aspects**
- ❧ **Potential Significant Impacts**



(what does this mean to you?)

Objectives -- EMS Aspects/Impacts

Significant Environmental Aspects

Pinpoints high potential/risk areas

Potential Significant Environmental Impacts

- Provides focus for workers.**
- Identifies needs for corrective actions and preventative controls.**

Issue:

**EMS Terminology not widely
Recognized, Understood or Used
in Operations.**

Issue Resolution

- ❧ Terminology should be familiar to Operations
- ❧ For effective ISMS integration need to *speak* the ISMS language
- ❧ In process of changing:
 - Environmental “Aspects” to “Vulnerabilities”
 - “Potential Impacts” to “Hazards”
- ❧ Operations want more complete communications of significance of environmental hazard.

Environmental Consequences

What Are They?

Potential Consequences

- Worker/Public Injury
 - Non-Compliance
-
- Significant Env. Impact
 - Negative Public Perception
 - Customer Perception
 - Questionable Work Practice (leading indicator)

Impacted Areas

- Worker/Public
 - Violation
-
- Environment
 - Performance perception
 - Actual performance (watch the trend)



EMS → ISMS: Conceptual Path

Aspects (**Vulnerabilities**) ← **Environmental Consequences**

Potential Impacts (**Hazards**)

EMS Integration

Analyze Hazards

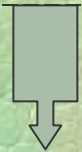
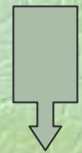
Define Scope

Implement Controls

ISMS Process

Feedback

Perform Work



Communicate What, Why, When

- ✂ Evaluate/Communicate *potential impacts* - possible consequences
- ✂ *Categorize* environmental problem:
Safety...Compliance...Potential significant threat...NOV...Fine...Best management practice, etc.
- ✂ *Analyze Hazards* - determine abatement and timeframe.
- ✂ Consider Formal Protocol -- approved and institutionalized by Operations.

Significance & Timeframes

(Strawman)

- ❧ **Non-compliance or Worker Safety** - *Immediate*
- ❧ **Imminent Danger to Environment** - *Immediate*
- ❧ **Potential Significant Impact** - *One Week*
(Includes Public/Customer perception)
- ❧ **Best Management Practice** - *Two Months*
(Facility Mgr. concurrence needed)
- ❧ **Opinion/Recommendation** - *Facility Mgr. decides*

Improvement Objectives

- ❧ **Worker Safety**
- ❧ **Protection of the Environment**
- ❧ **Prevent Non-Compliance, NOV, Fine, etc.**
- ❧ **Achieve/maintain environmental performance excellence**
- ❧ **Good results on internal and external audits**

Performance Measures

- 🐉 # of non-compliances
- 🐉 Time since last citation
(NOV, Consent Order, Fine, etc.)
- 🐉 # of reportable releases
- 🐉 Regulator Agency Audit results
- 🐉 Independent Assessment Results
(Facility Evaluation Board, FEB)
- 🐉 Annual Management Evaluation

Summary

- ❧ **Objective -- Continuous Improvement of environmental performance through effective & complete communications, comprehensive hazards analyses, and timely corrective actions.**
- ❧ **How?--Environmental issues handled like Safety**
- ❧ **Key Factor: --*Complete Communication*--**
 - **What? -- Category of problem (understandable language)**
 - **Why? -- Consequences**
 - **When? -- Timeframe**
 - **Formalized Protocol**